

**Appl. No.** : **10/691,470**  
**Filed** : **October 22, 2003**

## **REMARKS**

In response to the Office Action mailed May 4, 2007, the Applicant respectfully requests the Examiner to reconsider the above-captioned application in view of the foregoing amendments and the following remarks.

### ***Summary of the Office Action***

In the May 4, 2007 Office Action, Claims 39-57, 62 and 63 stand rejected. Claims 39, 45-57, 62, and 63 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,074,790, issued to Bauer et al. (hereinafter Bauer), in view of U.S. Patent No. 3,466,748, issued to Christensen (hereinafter Christensen). Claims 39, 40-44, 47-52, 57, 62 and 63 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer in view of U.S. Patent No. 5,795, 160, issued to Hahn et al (hereinafter Hahn).

### ***Summary of the Amendment***

Upon entry of this amendment, Applicant will have amended Claims 39 and 63. Applicant will have submitted new Claims 64-69 for consideration. By this amendment, Applicant responds to the Examiner's comments and rejections made in the April 11, 2007 Office Action. Applicant respectfully submits that the present application is in condition for allowance.

### ***Traversal of Rejection under 35 U.S.C. § 103(a)***

In the May 4, 2007 Office Action, Claims 39, 45-57, 62 and 63 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer in view of Christensen. Further, Claims 39, 40-44, 47-52, 57, 62 and 63 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer in view of Hahn. Applicant respectfully traverses these rejections and requests that they be withdrawn.

### ***In re Claim 39***

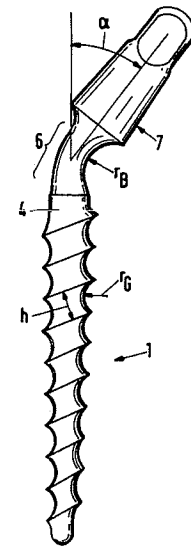
The combination of Bauer as the base reference and Christensen or Hahn as a secondary reference to provide elements missing from Claim 39 is improper because one of skill in the art

would be motivated not to make such combinations and modifications. One of skill would be motivated not to make the combinations and modifications suggested by the Examiner because it would be a fundamental change that is contrary to the explicit teachings of Bauer. Further, the modification to the flat areas of the post of the Bauer implant suggested by the Examiner would destroy a principle of operation of Bauer. Therefore, Applicants respectfully submit that the combinations of Bauer in view of Christensen and Bauer in view of Hahn are the result of impermissible hindsight and should be withdrawn.

Bauer discloses a screw implant 1 having threads 2 along a distal portion thereof, an implant shoulder 4 proximal to the threads 2, and a neck 5 disposed intermediate the shoulder 4 and an implant post 7. See Bauer, cols. 3-4. The implant post 7 "narrows conically upward and, at an upper end region, defines two flat opposed areas 8. The flat areas 8 form a rectangle which serves for coupling an instrument, which is used as an aid for screwing in the implant, and for bending and straightening the post 7." *Id.* at col. 3, lines 35-39.

As noted in Figure 2 of Bauer at right, the neck 5 of the implant 1 is bent in a bending zone 6. Importantly, this bending zone 6 is disposed below the flat areas 8 whereat the instrument attaches to the implant 1 for bending and straightening the post 7.

Fig.2



In contrast, Claim 39 is directed to an implant, *inter alia*, having "a torque engagement segment position below the flexible neck segment and above the body segment." The Examiner argues that it would be obvious to move the torque engagement segment position to above the neck as in Bauer, and that such a modification is a matter of routine experimentation. However, one of skill in the art would not be motivated to make this modification because one of the fundamental principles of operation of the flat areas 8 is to aid in the bending and straightening of the post 7. This is undermined and eliminated by moving the flat areas 8 to below the bending zone 6. Applicant believes that it is clear that it would be impossible to bend and straighten the post 7 at the flat areas 8 using the instrument described in Bauer if the Bauer implant were modified to move the flat areas to below the bending zone 6. This fact would motivate one of skill not to make the modification suggested by the Examiner.

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Further, if one of skill were to do make the modification suggested by the Examiner, a new tool would need to be used for bending and straightening the post 7. Thus, two tools would be required to install the implant 1. This is another drawback and reason why one of skill would be unlikely to make such a modification.

Furthermore, because this modification represents a fundamental change to the Bauer implant, Applicant submits that it would destroy the principle of operation of the Bauer implant. As such, the proposed modification is improper and cannot support a rejection of Claim 39 under Section 103(a). Accordingly, Applicant respectfully request that the Examiner withdraw the rejections of Claim 39 and indicate that Claim 39 is allowable over the art of record.

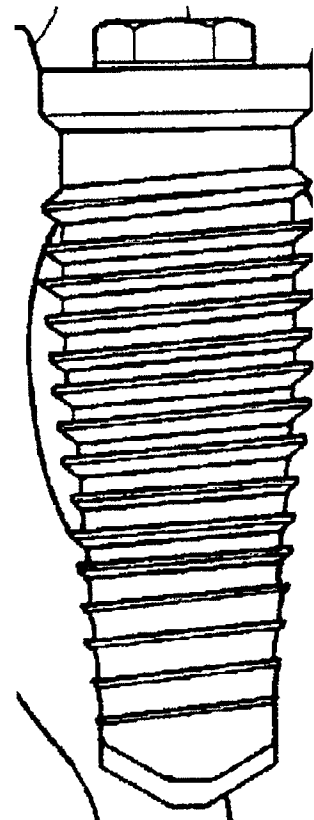
In re Claim 63

While Applicant reserves the right to prosecute these claims as originally filed, Applicant has amended Claim 63 in order to expedite prosecution of this Application. Accordingly, Applicant respectfully requests that the rejections of Claim 63 be withdrawn because Bauer, Christensen, and Hahn fail to disclose each and every feature recited in Claim 63.

As amended, Claim 63 is directed to a dental implant comprising, *inter alia*, a body segment “having threads extending helically about the implant axis, the threads having an apical surface increasing in width from a minimum adjacent the neck segment to a maximum at a distal end of the body segment” (emphasis added).

In contrast, neither Christensen nor Bauer illustrate, disclose, or teach a thread having an apical surface. Both Christensen and Bauer illustrate and teach that the apex of the threads have pointed tips at their apex. See Christensen, Fig. 1 (illustrating a pointed tip of the thread); Bauer, Fig. 1-2, col. 4, lines 19-38 (illustrating a pointed tip of the thread and discussing the concave design of the thread turns).

Further, although an enlarged view of Hahn’s Figure 4 (shown at right) apparently illustrates threads with apical surfaces, Hahn does not disclose or otherwise teach “a flat apical surface increasing in width from a minimum adjacent the neck segment to a maximum at a



distal end of the body segment,” as recited in Claim 39, or “an apical surface increasing in width from a minimum adjacent the neck segment to a maximum at a distal end of the body segment,” as recited in Claim 63. Indeed, the apical surfaces of the threads shown in Figure 4 of Hahn appear to be of a constant width near the upper end of the implant and then become narrower towards the distal end thereof until the apical surface apparently disappears at the distal end.

Applicant also notes that Hahn indicates:

The thread portion 22 is preferably generally of the type described by Krueger in U.S. Pat. No. 4,826,434, or a modification thereof wherein the thread has a flat surface facing away from the distal end of the implant and a tapered end facing toward the distal end of the implant. In the example of FIG. 1, the outer periphery of the thread 22 is truncated to define a cylindrical helix.

Hahn, col. 3, lines 57-63 (emphasis added).

The flat surface of the thread mentioned in Hahn is the top surface of the thread facing away from the distal end of the implant, as shown at right in Figures 1 and 3. Hahn never even describes the apical surface of the threads. Thus, although Hahn may inadvertently show threads having apical surfaces, as shown in Figure 4, nothing in Hahn teaches or discloses the apical surfaces as recited in Claims 39 and 63 that

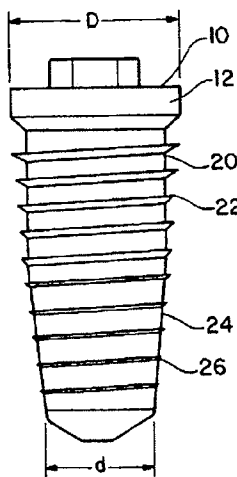


FIGURE 1

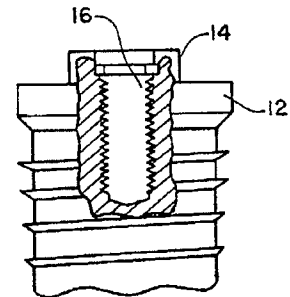


FIGURE 3

“increase[e] in width from a minimum adjacent the neck segment to a maximum at a distal end of the body segment.”

Therefore, Applicant respectfully requests that the rejections under Section 103(a) be withdrawn and that Claims 39 and 63, as well as the claims depending therefrom be allowed.

#### ***New Claims 64-69***

Applicant also hereby submits new Claims 64-69 for consideration. Applicant submits that Claims 64-68 are allowable for at least the reason that they depend from an allowable base claim, Claim 63. Further, Claim 69 is allowable as it is directed to a dental implant comprising,

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*inter alia*, "threads having a flat apical surface increasing in width from a minimum adjacent the neck segment to a maximum at the distal end." Therefore, Applicant respectfully requests that the Examiner indicate that these claims are allowable over the art of record.

No Disclaimers or Disavowals

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, the Applicants are not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. The Applicants reserve the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that the Applicants have made any disclaimers or disavowals of any subject matter supported by the present application.

**CONCLUSION**

Applicant respectfully submits that the above rejections and objections have been overcome and that the present application is now in condition for allowance. Therefore, the Applicant respectfully requests that the Examiner indicate that Claims 39-57 and 62-69 are now acceptable and that Claims 39-57 and 62-69 are allowed. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

Applicant respectfully submits that the claims are in condition for allowance in view of the above remarks. Any remarks in support of patentability of one claim, however, should not be imputed to any other claim, even if similar terminology is used. Additionally, any remarks referring to only a portion of a claim should not be understood to base patentability on that portion; rather, patentability must rest on each claim taken as a whole. Applicant respectfully traverses each of the Examiner's rejections and each of the Examiner's assertions regarding what the prior art shows or teaches, even if not expressly discussed herein. Although amendments have been made, no acquiescence or estoppel is or should be implied thereby. Rather, the

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amendments are made only to expedite prosecution of the present application, and without prejudice to presentation or assertion, in the future, of claims on the subject matter affected thereby. Applicant also has not presented arguments concerning whether the applied references can be properly combined in view of, among other things, the clearly missing elements noted above, and Applicant reserves the right to later contest whether a proper motivation and suggestion exists to combine these references.


The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claim and drawings in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call the Applicant's attorney in order to resolve such issue promptly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: 10/1/07

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